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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,487	04/12/2004	Peter Oosterhoff	P0011071.01	3020
27581	7590	05/27/2010		
MEDTRONIC, INC. 710 MEDTRONIC PARKWAY NE MINNEAPOLIS, MN 55432-9924				
EXAMINER				
HELLER, TAMMIE K				
ART UNIT		PAPER NUMBER		
3766				
NOTIFICATION DATE		DELIVERY MODE		
05/27/2010		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/822,487

Applicant(s)

OOSTERHOFF ET AL.

Examiner

TAMMIE HELLER

Art Unit

3766

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34-36, 38, 40, 41, 43-45, 47, 49-51, 53-55, 57 and 59-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 34-36, 38, 40, 41, 43-45, 47, 49-51, 53-55, 57, 59-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 1, 2010 has been entered. By this amendment, claims 33, 41, 45, 47, 49, 51, 55, and 59-61 are amended, claims 33, 42, and 52 are cancelled, and claims 33-35, 38, 40, 41, 43-45, 47, 49-51, 53-55, 57, and 59-61 are now pending in the application.

Claim Objections

2. Claim 51 is objected to because of the following informalities: the phrase "modulate a pacing interval modulates a pacing interval that the ventricular pacing pulse is delivered at" repeats "modulate a pacing interval" and is grammatically improper. It is suggested that such a phrase be rewritten to read "modulate a pacing interval at which the ventricular pacing pulse is delivered".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 33-35, 38, 40, 41, 43-45, 47, 49-51, 53-55, 57, and 59-61 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly

point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 41 recites the limitations "a processor that modulates a pacing interval at which the ventricular pacing pulse is delivered" in lines 4-5 and "extends a pacing interval between the delivered pacing pulse and a subsequently scheduled pacing pulse responsive to the autonomous intrinsic signal component being detected" In lines 8-10. The Examiner believes that the pacing intervals referenced in the limitations are two separate pacing intervals. However, in the response filed on April 1, 2010, the Applicant characterizes the pacing intervals as being the same interval that is modulated or adjusted two separate times. It is therefore unclear if the pacing intervals referenced in the two limitations are intended to be two separate intervals, or the same interval that is modulated/adjusted separately.

6. Claim 51 recites the limitations "modulate a pacing interval modulates a pacing interval that the ventricular pacing pulse is delivered at" in lines 4-5 and "extend a pacing interval between the delivered pacing pulse and a subsequently scheduled pacing pulse responsive to the autonomous intrinsic signal component being detected" In lines 11-13. The Examiner believes that the pacing intervals referenced in the limitations are two separate pacing intervals. However, in the response filed on April 1, 2010, the Applicant characterizes the pacing intervals as being the same interval that is modulated or adjusted two separate times. It is therefore unclear if the pacing intervals referenced in the two limitations are intended to be two separate intervals, or the same interval that is modulated/adjusted separately.

7. Claim 60 recites the limitations "modulating a pacing interval at which the ventricular pacing pulse is delivered" in lines 3-4 and "extending a pacing interval between the delivered ventricular pacing pulse and a subsequently scheduled ventricular pacing pulse responsive to the autonomous intrinsic signal component being detected" in lines 9-11. The Examiner believes that the pacing intervals referenced in the limitations are two separate pacing intervals. However, in the response filed on April 1, 2010, the Applicant characterizes the pacing intervals as being the same interval that is modulated or adjusted two separate times. It is therefore unclear if the pacing intervals referenced in the two limitations are intended to be two separate intervals, or the same interval that is modulated/adjusted separately.

8. Claim 61 recites the limitations "modulating a pacing interval by randomly altering a delivery time of the pacing pulse" in lines 3-4 and "extending a pacing interval between the delivered pacing pulse and a subsequently scheduled pacing pulse responsive to the autonomous intrinsic signal component being detected" in lines 9-11. The Examiner believes that the pacing intervals referenced in the limitations are two separate pacing intervals. However, in the response filed on April 1, 2010, the Applicant characterizes the pacing intervals as being the same interval that is modulated or adjusted two separate times. It is therefore unclear if the pacing intervals referenced in the two limitations are intended to be two separate intervals, or the same interval that is modulated/adjusted separately.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claims 51, 53-55, 57, and 59 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Independent claim 51 sets out a "computer-readable medium comprising instructions" which may be transitory or non-transitory. A transitory computer-readable medium is considered non-statutory subject matter under 35 U.S.C. 101. It is suggested that the Applicant amend independent claim 51, and any claims that depend from claim 51, to refer to a "non-transitory computer-readable medium".

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 34-36, 38, 40, 41, 43-45, 47, 49-51, 53-55, 57, and 59-61 are rejected under 35 U.S.C. 102(e) as being anticipated by Bradley (U.S. 2003/0050671). Regarding claims 36, 38, 41, 45, 47, 51, 55, 57, 60, and 61, Bradley discloses a method and apparatus for capture tracking that includes at least one electrode 26, 32, 34, 36 to deliver a ventricular pacing pulse and sense a ventricular signal response and a

processor 60 (see Figures 1 and 2). Further, Bradley discloses that the processor detects whether an autonomous intrinsic signal component is present within the sensed ventricular response by comparing a morphological characteristic of a past signal response to the same morphological characteristic of the sensed response (see Abstract) and extends a pacing interval in response to the detecting of an autonomous intrinsic signal component (see Figures 5 and 6). Further, Bradley discloses modulating a pacing interval to aid in the detection of the autonomous intrinsic signal component (see paragraph 64).

13. Regarding claims 34, 43, and 53, Bradley discloses modulating an atrial to ventricular pacing delay to aid in the detection of the autonomous intrinsic signal component (see paragraph 64).

14. Regarding claims 35, 44, and 54, Bradley discloses that the subsequently delivered pacing pulse may be delivered to a ventricle (see Figures 5 and 6 and paragraph 40).

15. Regarding claims 40, 49, and 59, Bradley discloses that the morphological characteristic may be amplitude (see paragraph 100) or slope (see paragraph 72).

16. Regarding claim 50, Bradley discloses a memory 94 (see Figure 2).

Response to Arguments

17. Applicant's arguments filed April 1, 2010 have been fully considered and were found persuasive in part, moot in part, and non-persuasive in part. Those arguments which were found persuasive or moot will not be answered herein as the associated rejections have been withdrawn above.

18. Regarding the objection to claim 51 which was made in the previous Office Action, the Applicant indicates that the amendment to claim 51 overcomes such an objection. The Examiner respectfully disagrees and submits that lines 4-5 of claim 51, which were previously objected to, have not been amended in the response of April 1, 2010. As such, the objection stands.

19. Regarding the rejection of the claims as being anticipated by Bradley, the Applicant argues that Bradley's disclosure of modulation of the AV and VV pacing intervals as part of its rate response function is unrelated to the capture detection function. The Applicant further argues that "the claims as previously pending and as presently amended required an extension of the pacing interval if the morphology of the sensed depolarization following a delivered pacing pulse indicated intrinsic activity." It appears that the Applicant is arguing that the Examiner's citation of paragraph 64 as a disclosure of "modulating a pacing interval to aid in the detection of the autonomous intrinsic signal component" is to equate to the claim language directed to extending a pacing interval between the delivered pacing pulse and a subsequently scheduled pacing pulse responsive to the autonomous intrinsic signal component being detected. However, the citation of paragraph 64 made in the previous Office Action, and again above, is a citation to teach that "Bradley discloses modulating a pacing interval to aid in the detecting of the autonomous intrinsic signal component." As the Applicant does not appear to disagree with this characterization of Bradley, it is unclear what the Applicant considers to be deficient in Bradley. It appears that the Applicant is equating the "pacing interval at which the pacing pulse is delivered" to be the same as the "pacing

interval between the delivered pacing pulse and a subsequently scheduled pacing pulse responsive to the autonomous intrinsic signal component being detected.” As this remains unclear, the Examiner has presented the rejections under 35 USC 112, second paragraph, as outlined above. Further, based on the Examiner’s interpretation that these intervals are separate, it is believed that Bradley anticipates the claims as presented and the rejection stands.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAMMIE HELLER whose telephone number is (571)272-1986. The examiner can normally be reached on Monday through Friday from 7am until 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Carl H. Layno can be reached on 571-272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 3766

/Tammie Heller/

Examiner, Art Unit 3766

/Carl H. Layno/

Supervisory Patent Examiner, Art Unit 3766